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Fax Cover Sheet

Date: 20 May 2005

To: Barbara S. Kitchell	**From:** Joseph T. Woitach
Application/Control Number: 09/755,204	**Art Unit:** 1632
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Re: copy of action	**CC:**

☐ **Urgent** ☒ **For Review** ☐ **For Comment** ☐ **For Reply** ☒ **Per Your Request**

Comments:

Attached is a copy of the Notice of Allowance. I am sorry I am a day late with the fax. If there is any other information you need please feel free to coantact me.

Sincerely,

Joseph Woitach

Number of pages 4 including this page

Memorandum

To: Bruce Kisliuk and Jasemine Chambers, Directors 1600

CC: Deborah Reynolds, QAS

From: Joseph Woitach, Examiner 1632

Date: 5/17/05

Re: SAWS Report

Serial Number: 09/755,204

Actual Filing Date: January 4, 2004

Effective Filing Date: January 4, 2000 (provisional applications: 60/174,383 and 60/174,424)

Assignee: None

Primary Examiner: Joseph Woitach

SPE: Ram Shukla

Prosecution Status: After Final in condition for allowance

Title: METHOD FOR CLONING ANIMALS WITH TARGETTED GENETIC ALTERATIONS BY TRANSFER OF LONG-TERM CULTURED MALE OR FEMALE SOMATIC CELL NUCLEI, COMPRISING ARTIFICIALLY-INDUCED GENETIC ALTERATIONS, TO ENUCLEATED RECIPIENT CELLS

Inventors: Yang and Kubota

Key Words: nuclear transfer, cybrid, pregnancy rate, bovine, cow,

Short Summary of Technology (non-technical)

Nuclear transfer methodology using cultured adult fibroblast cells has been used to clone various mammal, and the present invention provides an improvement to the existing methodology for use in the species of bovine. More specifically, the present invention is based on the observation that culturing adult bovine fibroblast cells for about ten passages in serum starved media results in increased pregnancy rates when combined with existing nuclear transfer methodology. Review of the prior art indicates that long term cultures of primary bovine fibroblasts have been used in nuclear transfer, however the specific conditions of using serum starved media for about ten passages has not been practiced, nor suggested. More importantly, these specific conditions appear to provide the greatest increase in pregnancy rate relative to the age of the donor, the number of passages of the cell in serum starved media and any other media condition assayed.

Impact statement

The present invention provides an improvement to existing nuclear transfer technology. Prosecution has narrowed the scope of the claims to use in bovine, and specific conditions that resulted in increased pregnancy rates that would not have been predicted based on the art of record.

Sample claim

1. A method of improving pregnancy rates in a female-bovine, comprising:
culturing adult bovine fibroblast donor cells in serum starved media;
passaging the cells for about 10 passages;
nuclear transferring the donor cells into enucleated recipient bovine oocvtes to form a cybrid;
culturing the cvbrid; and
transferring the cybrid into a recipient female bovine wherein pregnancy rates re up to at least about 64%.